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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/652,842 08/31/00 AGARWAL

V 98-0616.05

EXAMINER

MM91/0913

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KESHAVAN, R

ART UNIT

PAPER NUMBER

2825

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.

09/652,842

Applicant(s)

AGARWAL, VISHNU K.

Examiner

Belur V Keshavan

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17, 18 and 20-24 is/are rejected.
- 7) ☒ Claim(s) 19, 21 and 24 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 4, 5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

Claims 21 and 24 are objected to under 37 CFR 1.75 as being a duplicate of claim 20 and 23 respectively. Claim 21 and claim 24 cover the same particular subject matter as in claim 20 and claim 23 respectively. The examiner understands that the phrase “exposing said first conductive layer to a passivation gas in-situ” in claim 20 and the phrase “exposing said first conductive layer to a passivation gas while still in said first environment” in claim 21 mean the same. Regarding claims 23 and 24 the examiner understands that the phrases “oxygen free environment” in claim 23 and “a second oxygen free environment” in claim 24 mean the same as there is no reference to a first oxygen free environment. Examiner suggests applicants to cancel duplicate claims.

Any further indications of allowance or rejection of claims 20, 21 and claims 23, 24 are respectively based on claims 20, 21 and claims 23, 24 as they are understood by the examiner.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 18, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishihori et al. (U.S. Patent No.5, 670,808).

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Regarding claims 17, 22, 23 and 24 (duplicate of claim 23) Nishihori et al. disclose in column 9 lines 29-46 and in figure 12C a method of forming a capacitor plate comprising:


Providing a first conductive layer WN<sub>x</sub> (43) in an oxygen free first environment ;  
exposing the first conductive layer to a passivation gas in the oxygen free environment;  
depositing a second conductive layer WN<sub>x</sub> (45) over first conductive layer in the oxygen free environment.

Regarding claims 18, 20 and 21 (duplicate of claim 20), Nishihori et al. disclose exposing the first conductive layer to a passivation gas in an oxygen free environment to enhance oxidation resistance of the first conductive layer. Ex-situ and in-situ methods are well known in the art. Therefore it is obvious matter of design choice to select either in-situ or ex-situ for exposing the first conductive layer to a passivation gas in an oxygen free environment, since applicants have not stated what problems are solved in the choice of either in-situ or ex-situ processes.

***Allowable Subject Matter***

Claim 19 is objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The primary reason for the indication of the allowability of claim 19 is the inclusion therein, in combination as currently claimed, of the limitation of exposing the first conductive layer to a passivation gas comprising silane in a second environment.



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*Closing*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Belur V Keshavan whose telephone number is 703 306 5985.

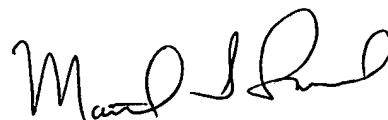
The examiner can normally be reached on 8-4:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 703 308 1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305 3431 for regular communications and 703 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

bvk   
August 29, 2001

Belur V. Keshavan  
Examiner. Art Unit 2825



MATTHEW SMITH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800